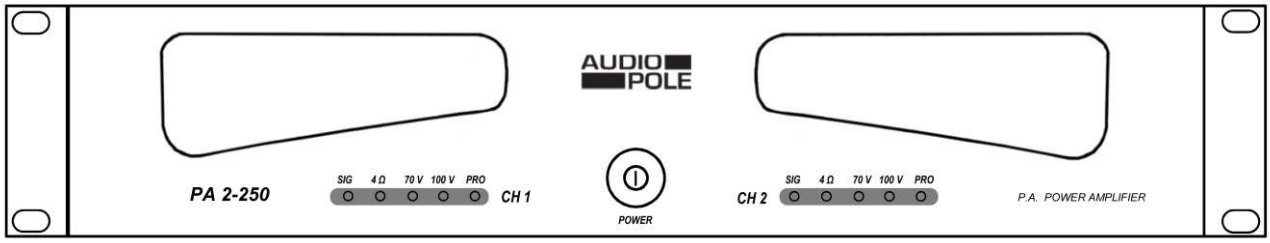
AUDIO POLE

PA 4-250

4 CHANNEL 4 Ω /70 V /100 V POWER AMPLIFIER



USER'S MANUAL

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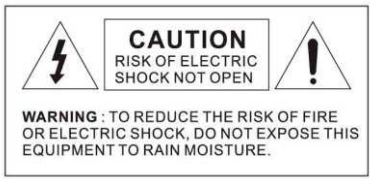
Important Safety Instructions


CAUTION
RISK OF ELECTRIC SHOCK NOT OPEN
WARNING : TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN MOISTURE.

This symbol, wherever used, alerts you to the presence of un-insulated and dangerous voltages within the product enclosure. These are voltages that may be sufficient to constitute the risk of electric shock or death.

This symbol, wherever used, alerts you to important operating and maintenance instructions.

POWER SUPPLY

Ensure that the insource voltage (AC outlet) matches the voltage rating of the product. Failure to do so could result in damage to the product and possibly the user. Unplug the product before electrical storms occur and when unused for long periods of time to reduce the risk of electric shock or fire.

EXTERNAL CONNECTION

Always use proper ready-made insulated mains cabling (power cord). Failure to do so could result in shock/death or fire. If in doubt, seek advice from a registered electrician.

DO NOT REMOVE ANY COVERS

Within the product are areas where high voltages may present. To reduce the risk of electric shock do not remove any covers unless the AC mains power cord is removed. Covers should be removed by qualified service personnel only. No user serviceable parts inside.

FUSE

To prevent fire and damage to the product, use only the recommended fuse type as indicated in this manual. Do not short-circuit the fuse holder. Before replacing the fuse, make sure that the product is OFF and disconnected from the AC outlet.

PROTECTIVE GROUND

Before turning the unit on, make sure that it is connected to Ground. This is to prevent the risk of electric shock. Never cut internal or external Ground wires. Like wise, never remove Ground wiring from the Protective Ground Terminal.

OPERATING SAFETY INSTRUCTIONS

Read these instructions. Follow all instructions. Keep these instructions. Do not discard. Heed all warnings. Only use attachments/accessories specified by the manufacturer.

POWER CORD AND PLUG

Do not tamper with the power cord or plug. These are designed for your safety. Do not remove Ground connections! If the plug does not fit your AC outlet seek advice from a qualified electrician. Protect the power cord and plug from any physical stress to avoid risk of electric shock. Do not place heavy objects on the power cord. This could cause electric shock or fire.

SERVICING

Refer all servicing to qualified service personnel only. Do not perform any servicing then those instructions contained within this User's Manual

DISPOSAL

This symbol indicates that the disposal of this product is submitted to local regulations. Please contact your local dealer.

1 Introduction

Thank you for purchasing Audiopole **PA 4-250**. This amplifier has 4 independents channels of 250 W each which can drive loads of 4 Ohms, 70 V and 100 V for Public Address applications.

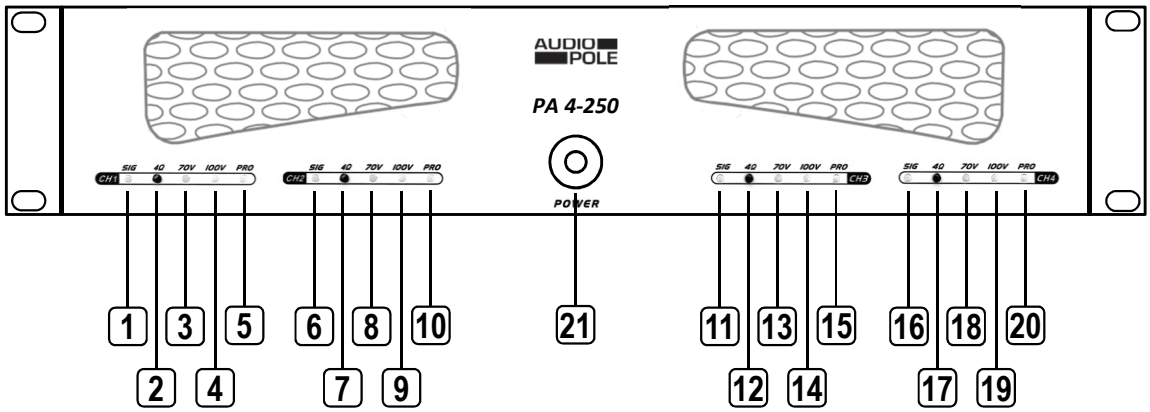
Unlike most 100 V amplifiers, **PA 4-250** does not use output transformers, which allows to power the speakers with a high quality signal. In addition, Class-H technology brings a gain weight and space while offering high-yield performances. One of the main applications of the **PA 4-250** is the amplification of independent zones using low impedance outputs for near field and 100 V line for long distance speakers. The device concentrates all the settings on the rear panel and control leds on the front panel; it allows full monitoring of the amplifier status.

2 Features

- 4 x 250 W
- 4 Ω, 70 V or 100 V outputs
- Class-H amplification
- No output transformers
- 2 operating modes MONO or DUAL
- Signal presence indicators
- Workload indicators 4 Ω, 70 V and 100 V
- Protection indicators
- Band pass filter
- Balanced XLR inputs,
- Output screw terminals
- Two unit rack mount (2U)
- 9.8 kg

3 Controls and Settings

Front Panel



1, 6, 11, 16 - *SIG*
Individual signal indicator. The intensity of the LEDs varies depending on the level of the input signal.

2, 7, 12, 17 - *4 Ω*
Individual 4 Ω output indicator. See paragraph (29), (32), (37), (40).

3, 8, 13, 18 - *70V*
Individual 70 V output indicator. See paragraph (29), (32), (37), (40).

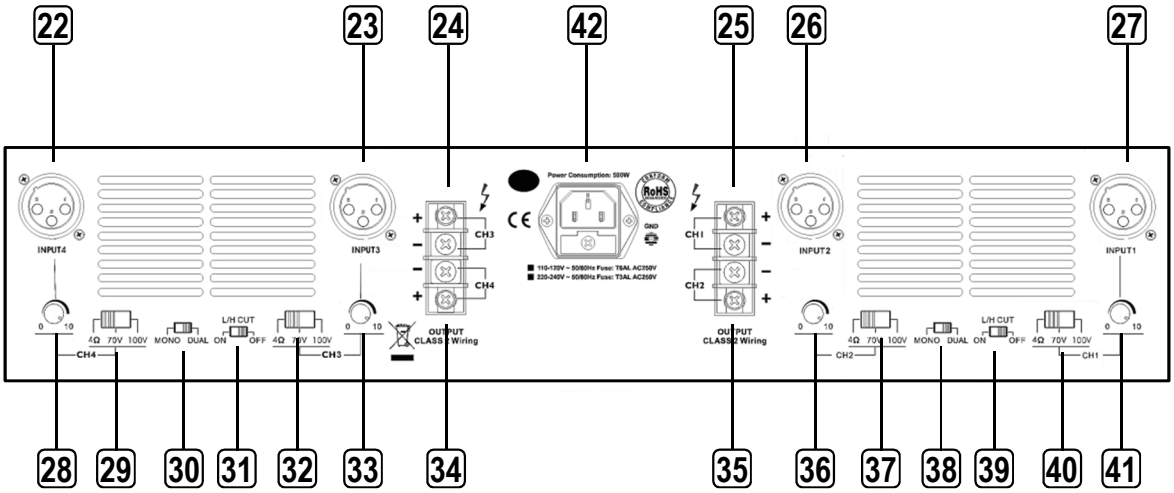
4, 9, 14, 19 - *100V*
Individual 100 V output indicator. See paragraph (29), (32), (37), (40).

5, 10, 15, 20 - *PRO*
Individual protection indicator.
PA 4-250 is equipped with a safety start function, muting the amplifier for a few seconds after the power is switched on. This delay is visible through the Led which lights up then shuts off as soon as the amplifier becomes operational.
If the led of one or more channels stays on after few seconds or if it illuminates during normal using of the amplifier, it means that a problem has been detected. The channel concerned intersecting automatically to protect amplification circuits and equipment connected to the device.

11 - *POWER*
Turn On / Off

3 Fonctions et réglages

Back Panel



22, 23, 26, 27 - INPUT
XLR balanced inputs.

24, 25, 34, 35 - OUTPUT
Speaker outputs on screw terminals. Check the tightness of the cables before use.

28, 33, 36, 41 - Levels
Adjust the levels of the input signals.

29, 32, 37, 40 – Output selector
Position 4 Ω allows the use of standard speakers. Be careful, do not use loads less than 4 Ω at risk of damaging the amplifier.
The 70 V or 100 V position requires speakers equipped with 70 V or 100 V line transformers and a parallel connection.
For these two modes, the sum of the powers of the speakers must not exceed the nominal power of the amplifier. For example, it will not be possible to use more than 25 speakers 10 W on the same channel.
The selector must be activated when the power is turned off and disconnected from the speaker outputs.

30, 38 - MONO DUAL
In the case of a Mono signal for which two amplifier channels are required, the switch must be set in MONO mode. The signal of one of the inputs is automatically send the other, which avoids an additional wiring. For example, for channels 1 and 2 connect the audio source to input 1, for channels 3 and 4 connect the source to input 3. For standard use, meaning one signal per channel, turn the switch in DUAL position.

31, 39 - L/H
Switching on/off function of a band pass filter for 70 V or 100 V mode. This filter allows to eliminate any hum or background noise and protects the speakers.

42 – AC INPUT
Power outlet. Before any connections make sure that the power cable is not damaged. The connection to the mains supply must have an earth connection. The mains voltage supplied must conform with the electrical characteristics of the appliance (see Chapter 5).

4 Installations Hints

In case of installation in cabinet or rack, ensure the ventilation requirements. The depth of the unit is 425 mm. The dimensions in height is 2 units Rack (88 mm).

Do not position high-gain audio equipment like preamplifiers or recorders just above or below the amplifier. Despite the protections of the radiation device, magnetic fields can induce hum in unscreened ancillary equipment.

Do not obstruct the entrance and exits of air for the cooling of the amplifier. Any impediment to the free movement of air in the amplifier may cause a failure not covered by the warranty.

The amplifier use in an environment where the air is confined or polluted requires frequent internal cleaning. Smoke and dust particles accumulated inside the appliance can cause failures not covered by the warranty. This cleaning should be done by qualified personnel.

Before any work on the wiring, be sure to turn the control knobs fully counterclockwise and turn off the amplifier.

Only use good quality speaker cables, unshielded.
Use good quality audio cables, shielded, for inputs. A balanced connection is recommended to keep a signal without degradation.

5 Technical Specifications

RMS Power (per channel 4 Ω)	250 W
Amplification	Class-H
Outputs	4 Ω, 70 V, 100 V
THD	0.1 % (1 kHz/-3 dBv)
S/N	> 95 dB
Modes	DUAL / MONO
Crosstalk	> 60 dB
Input Level (balanced, 1 kHz)	0 ± 1.5 dBv
Input Level max. (balanced, 1 kHz)	20 dBv ± 1.5 dBv
Frequency Response	(L/H Filter OUT) 20 Hz – 20kHz ± 1 dB (L/H Filter IN) 200 Hz – 10 kHz ± 1 dB
Input Connectors	XLR balanced
Ouptut connectors	Screw terminals
Power Supply	~ 115-230 V, 50/60 Hz
Dimensions (L x D x H)	483 x 425 x 88.5 mm
Net Weight	9.8 kg

6 Malfunctions

Some occasional problems are very often linked to handling errors. By checking the points listed below, it will be possible to find without difficulty, solutions to potential malfunctions. If problems persist, consult a dealer or an authorized AUDIOPOLE service center.

Symptom	Cause	Solution
No power	• The mains cable is not correctly connected or is faulty. • The power switch is not pressed.	• Reconnect the power cord. • Change the cord. • Turn the switch ON.
No sound on one or more channels	• The volume is at a minimum. • Speakers are not connected. • One or more input signals are not connected or their level is at zero. • The MONO / DUAL switch is positioned improperly. • The PRO indicator is on.	• Adjust the volume. • Connect speakers. • Connect inputs and adjust the levels of the other equipment. • Modify selection. • Check HP lines and connections polarity
Saturated sound	Inappropriate input signal level.	Adjust levels and gains and the equalization of the other equipment.
Hum	Bad ground or faulty power supply.	Check the mains voltage.
Noise 70 V and 100 V lines	HP cables too close from equipment radiating (neon, lighting power supply).	Keep the cables far from radiating sources, engage the L/H filter
Lack of bass and treble high power	Engaged L/H filter.	Turn OFF the L/H filter.

7 Warranty

This device is warranted parts and labor against any manufacturing defects for a period of two years from the date of purchase by the first user.

Conditions

1. The unit has been installed and implemented by observing the safety instructions in this operating manual.
2. The device was not diverted from its destination, either voluntary or accidental, and suffered no deterioration or modification other than those described here or explicitly authorized by AUDIOPOLE.
3. All modifications or repairs have been carried out by an authorized service station.
4. The defective product must be returned with the dealer who made the sale or to an authorized service station with proof of purchase.
5. The device was properly packaged to avoid damage in transport.

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